



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

Workprogramme EURL-*Salmonella* 2021-2022 Closure

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Work programme 2021

- Due to late adoption of the Multiannual Financial Framework (MFF) 2021-2027 and of the new Single Market Program Regulation (SMP) by the Council and the European Parliament, the grant applications for EURLs work programs can be submitted only in the course of 2021.
 - To ensure the continuity of the activities, all EURLs had to informally submit the annual work program 2021 to the relevant DG SANTE technical desk officer.
 - January 2021: desk officer informally agreed with EURL-*Salmonella* work program 2021.
- Template for drafting work programme, follows Regulation (EU) 625/2017, Article 94(2) – like before.



Movement of RIVM to new building

- The National Institute for Public Health and the Environment (RIVM), where EURL-*Salmonella* is situated, is building a new building in Utrecht.
- Movement is delayed (due to corona crisis): at former workshop (September 2020) planning was end 2021/ early 2022 – current planning (May 2021) is end 2022/early 2023.
- Movement may affect some of the activities of the EURL (e.g. necessary to postpone a PT). If so, EC and NRLs will be informed asap.





Activity 1

'To ensure availability and use of high quality methods and to ensure high quality performance by NRLs.'

Sub-activity 1.1 Analytical methods

Objectives:

- Standardisation of methods (ISO and CEN).
- Keep track of developments in (alternative) methods.
- Provide NRLs with information on developments of relevant (standardised/new) analytical methods.

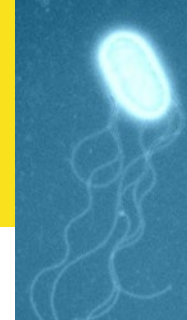




2020/2021 - Activities in ISO and CEN - I

ISO-WG10 Draft CEN ISO/TS 6579-4 (project leader) 'Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 4: Identification of monophasic *Salmonella* Typhimurium (1,4,[5],12:i:-) by polymerase chain reaction (PCR)'.

- **NWIP** voting 18/5-16/8 2020: 100% approval and few comments.
- Sept 2020 – April 2021: preparation 2 working drafts (WDs) and discussed with ISO-WG10 in 2 meetings (Nov 2020, March 2021).
- 22/4-26/5 2021: voting on **draft ISO/CD TS 6579-4** among members of ISO/TC34/SC9 & sent to NRLs-*Salmonella* for comments.
- Comments received from only 2 members of ISO/TC34/SC9 and from in total 8 NRLs-*Salmonella*. **Thank you very much!**



2020/2021 - Activities in ISO and CEN - I

ISO-WG10 Draft CEN ISO/TS 6579-4 (project leader) 'Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of *Salmonella* - Part 4: Identification of monophasic *Salmonella* Typhimurium (1,4,[5],12:i:-) by polymerase chain reaction (PCR)'.

Next steps:

- Discuss comments in ISO-WG10 (second half 2021).
- Preparation of 'final draft ISO/CD TS 6579-4'.
- Finalise report of method evaluation study (testing 172 strains by 2 labs) for publication at EURL-*Salmonella* website.
- Start preparation for the organisation of an interlaboratory study for determination of the performance characteristics.



2020/2021 - Activities in ISO and CEN - II

ISO-WG3 Method validation

- **EN ISO 16140-3** (member): 'Protocol for the verification of reference and validated alternative methods implemented in a single laboratory'. Published in January 2021.
 - Development of a calculation tool in Excel.
 - Webinar on use of EN ISO 16140-3 organized by NEN (NL) on 2 March 2021.
 - Supporting materials to facilitate implementation of ISO 16140 series available at website ISO/TC34/SC9 – see: <https://www.eurlsalmonella.eu/publications/analytical-methods> - Validation and verification





2020/2021 - Activities in ISO and CEN - III

ISO-WG3 Method validation

- Development of Amd.1 of **EN ISO 16140-2** (member): 'Protocol for the validation of alternative (proprietary) methods against a reference method'. – Revision of the qualitative method study data evaluation.
- Start drafting of **EN ISO 16140-7** (member) 'Protocol for validation of identification methods of microorganisms.'
- Development of a protocol for validation of **larger samples sizes** in detection methods (member).
- Subgroup to **review questions and documents** (member) concerning validation of methods from working groups of ISO/TC34/SC9 and CEN/TC463.



2020/2021 - Activities in ISO and CEN - IV

ISO-WG3 Method validation

Revision of **EN ISO 17468** (co-project leader) 'Technical requirements and guidance on establishment or revision of a standardized reference method':

- Inclusion information of EN ISO 16140-4 (in-house validation), EN ISO 16140-6 (validation of confirmation and typing methods) and EN ISO 11133 (performance testing of culture media);
- Addition of informative annexes with examples of (recently) developed ISO methods;
- Extension to situations where it is not possible to compare a new ISO method with a former reference method.





2020/2021 - Activities in ISO and CEN - V

ISO-AHG Validation status of ISO standards (member)

- Making inventory on presence of performance characteristics in EN ISO documents of microbiology of the Food chain.
- Per EN ISO document checked if performance characteristics are valid for a broad range of foods, or only for a limited no. of food categories.
- If EN ISO document is not validated for a broad range of foods, it is checked if additional data can be used from validation studies of proprietary methods (published by MicroVal and Afnor validation).
- EURL checks for validation data of EN ISO 6579-1.





2020/2021 - Activities in ISO and CEN - VI

ISO-WG25 Draft EN ISO 23418 (member) 'Microbiology of the Food Chain — Whole genome sequencing for typing and genomic characterization of foodborne bacteria — General requirements and guidance'.

- Voting for Draft International Standard (DIS) 18/9-11/12 2020: 100% positive, but with substantial number of comments (30 pages).
- Comments discussed at meeting ISO-WG25 April 2021 – agreements made on updating the document for next voting round (FDIS).





2020/2021 - Activities in ISO and CEN - VII

ISO-AHG on **harmonisation of ISO/CEN standards** for microbiology of the food chain (project leader).

- 'Internal' ISO/CEN Guidance document to help convenors and project leaders ISO/TC34/SC9 and CEN/TC463 with the drafting of ISO/CEN documents.
- To harmonise the content and layout of standards for microbiology of the food chain.
- Dynamic document and will need to be updated to any new agreements made in ISO and CEN.
- Edition 1 was published in 2018; ED2 in 2020.
- ED3 is under preparation – expected second half 2021.

Annual meetings ISO/TC34/SC9 and CEN/TC463: 7-11 June 2021.



Sub-Activity 1.2 EURLs working group on NGS

Objectives:

- Promote the use of NGS across the EURLs' networks.
- Build capacity on producing and using NGS data within the EU.
- Ensure liaison with the work of the EURLs and the work of EFSA and ECDC on NGS.

Description:

- Working group exists of 8 biological EURLs (AMR, *Campylobacter*, *E. coli*, *Listeria monocytogenes*, Parasites, *Salmonella*, Staphylococci, Foodborne Viruses).





EURLs working group on NGS

9 Activities in relation to NGS have been defined:

- 1) Proficiency Testing
- 2) NGS laboratory procedures (SOPs)
- 3) Bioinformatics tools
- 4) Cluster analysis of WGS data
- 5) Bench marking
- 6) Trainings on NGS
- 7) Reference and confirmatory testing using NGS
- 8) Follow-up of ISO activities on WGS
- 9) Quality parameters for sequencing



EURLs working group on NGS

- For each activity guidance documents are prepared and published on the websites of the (8) EURLs.
- Of 7 activities, the guidance documents have become available at the website of the EURL leading the activity. Other EURLs provide a link to the documents published by colleague EURLs.
- See <https://www.eurlsalmonella.eu/publications/analytical-methods> - Next Generation Sequencing (NGS)
- On 25-09-2020 an online conference was organised by the WG with support of the Med-Vet-Net association 'Modern technologies to enable response to crises: Next Generation Sequencing to tackle food-borne diseases in the EU': >500 participants!
- Second conference probably organised in second half 2021 – to give follow-up to questions from 1st conference.
- Joint EURLs training on NGS postponed to fall 2021 (preferably physical training).



Sub-Activity 1.3 Proficiency Tests (I)

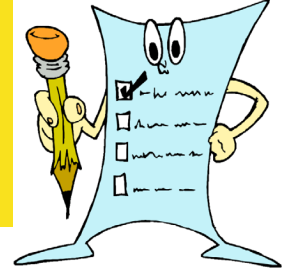
Objectives:

- Organisation of Proficiency Tests (PTs) to gain information on the performance of the NRLs-*Salmonella* for detection and typing of *Salmonella*.

Description:

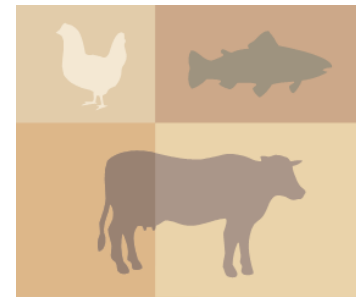
Organisation of 3 Proficiency Tests per year:

1. One study on detection of *Salmonella* in samples from the primary production stage.
2. One study on detection of *Salmonella* in food or animal feed samples.
3. One study on typing of *Salmonella* (serotyping, molecular typing).



Sub-Activity 1.3 Proficiency Tests (II)

- Sept/Oct 2021: **PT for Primary Production Stage (PPS)** - on detection of *Salmonella* in bootsocks with chicken faeces
- November 2021: **PT on typing** of *Salmonella* – serotyping (obligatory) and cluster analysis (voluntary).
- Approx. March 2022: PT on detection of *Salmonella* in food or animal feed samples: matrix not yet decided.





Activity 2

'To Provide scientific and technical assistance to NRLs.'

Sub-activity 2.1 Workshop

Objectives:

- Exchange of information on the activities of the NRLs-*Salmonella* and the EURL-*Salmonella*. Exchange of information on (new) developments in the relevant work field.

Description:

- 2022: Depending on the situation with SARS-CoV-2 pandemic, organisation of a physical meeting or an online meeting. Probably end of May 2022.



Sub-Activity 2.2 Training courses



Objectives:

- To train NRLs-*Salmonella* in a specific work field.

Description:

Physical training courses will depend on the situation with SARS-CoV-2 pandemic.

1. Training upon request of an NRL – current requests postponed to 2021/2022.
2. Training upon advice of the EURL (e.g., in case of repeated poor performance in PTs).
3. Joint EURLs training on WGS (basics) – postponed to fall 2021. Alternatively, it may become an online training (not preferred).



Sub-Activity 2.3 Scientific advice and support NRLs

Objectives and description:

- Provide scientific and technical assistance to the NRLs-*Salmonella* for the relevant work field.
- Perform confirmatory testing (samples/isolates) for NRLs-*Salmonella* when needed.
- Perform WGS analysis of isolates of NRLs-*Salmonella* for outbreak investigations.
- Maintenance of the EURL-*Salmonella* website and updating the information on the website.
- Inform the NRLs of the activities of the EURL and other parties in the relevant work field, as well as of developments in this field.
- Publication of 4 newsletters per year, through the website.




Publications


Analytical methods

Here, information is given on preparation of specific products, on analytical methods for detection, enumeration and typing of *Salmonella*, and on reference materials.


Detection of *Salmonella*

[More information](#) 


Enumeration of *Salmonella*

[More information](#) 


Serotyping of *Salmonella*

[More information](#) 


MLVA typing of *Salmonella*

[More information](#) 


Next Generation Sequencing (NGS)

[More information](#) 


Specific products

[More information](#) 


Reference materials

[More information](#) 


Validation and verification


[More information](#) 

Miscellaneous


[More information](#) 


activities, as well as the newsletters
on analytical methods related to

[Proficiency Test reports](#) 

[Workshop Reports](#) 

[Publications EURL-Salmonella](#) 

[Newsletters](#) 

[Analytical methods](#) 



Activity 3

'To Provide scientific and technical assistance to the European Commission and other organisations.'

Sub-activity 3.1 Scientific advice and support of EC and other organisations

Objectives:

- Provide scientific and technical assistance to EC DG SANTE for the relevant work field.
- Provide assistance to DG SANTE, EFSA and (NRLs of) Member States in case of (international) *Salmonella* outbreaks.
- Collaborate with EFSA and ECDC for the relevant work field.
- Cooperation with other biological EURLs.



Sub-Activity 3.1 Scientific advice and support EC

Description:

- Ad hoc scientific and technical assistance of DG SANTE.
- Member of the joint EFSA-ECDC Steering Committee for management of the (joint) EFSA-ECDC molecular typing database.
- Assistance of DG SANTE, EFSA, NRLs and ECDC in case of outbreaks, e.g consultation of NRL network for specific information, (sub)typing of suspect isolates (MLVA, WGS), analysis of data.



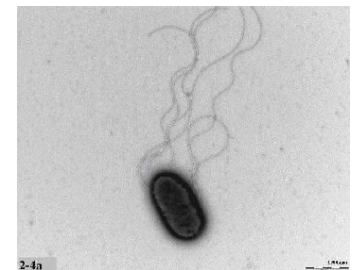


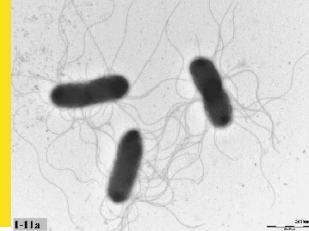
Salmonella events/outbreaks and monitoring 2020

- EURL/NRL-*Salmonella* network involved (to a certain extent) in approx. 6 events/outbreak investigations.
- Monitoring of the incidence of *Salmonella* Mikawasima in food (products), animals, animal feed or the environment: 6 NRLs-*Salmonella* from 5 EU-MS and 1 EFTA country reported 33 *S. Mikawasima* strains isolated from food or animals in 2020.

Thank you very much!!

No WGS (and epidemiological) clusters were found with the human isolates.





Activity 4 Reagents and reference collections

Sub-activity 4.1 Reference strains and reference materials

Objectives:

- Supply information on available culture collections and suppliers of microbiological reference materials. Investigation to the possibility for setting up a reference collection of WGS data.

Description:

- Reference to culture collections and reference materials at website.
- Maintenance in-house culture collection.
- Provide sets of reference strains (SE and STm) for MLVA typing.
- Publication of reference collection of genomes obtained from PTs.
- Provide link to WKLM scheme, keep contact with WHO ref centre.



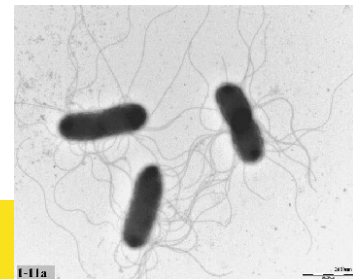
Reference strains and reference materials

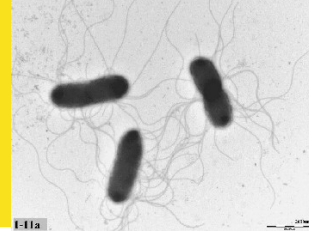
EURL-*Salmonella* website has been updated with more detailed information on culture collections and reference materials:

<https://www.eurlsalmonella.eu/publications/analytical-methods> - Reference materials.

Including:

- Definitions
- References to relevant EN ISO documents
- List of culture collections (not exhaustive)
- List of producers of microbiological (certified) reference materials (not exhaustive)





Publication of reference collection of genomes obtained from PTs.

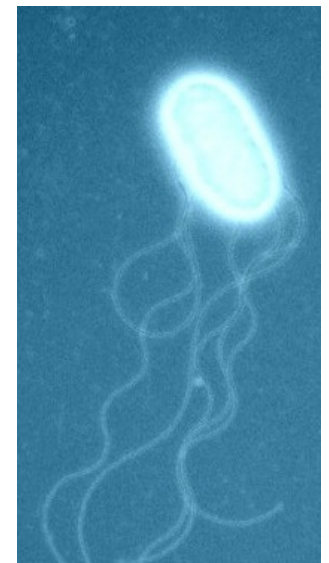
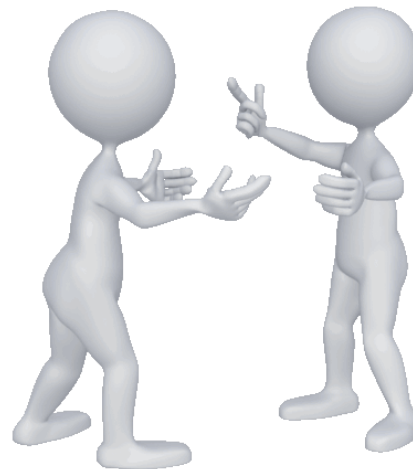
- At <https://www.eurlsalmonella.eu/publications/analytical-methods> - NGS.
 - link to Document 'Reference Whole Genome Sequencing collection'.
 - Contains tables with sequences of 6 strains (STm and monoSTm) produced by participants in the framework of EURL-*Salmonella* Proficiency Test Typing 2019.

Provide link to WKLM scheme, keep contact with WHO ref centre.

- At <https://www.eurlsalmonella.eu/publications/analytical-methods> - Serotyping of Salmonella.
 - link to WKLM scheme of 2007 & Supplements of 2010 and 2014.
 - According to WHO ref centre (May 2021), 2 more supplements are expected before the end of 2021.
 - Planned update of WKLM scheme unknown.



Questions? Remarks?
Other items to be discussed?





Closure

- After closure of the workshop we will send a link to an **evaluation form**. Thank you for completing it by **15 June 2021 at latest**. Information in the completed form is anonymous.
- We plan to publish the **presentations**, in pdf format, on the *EURL-Salmonella* website in the coming week(s). If not allowed, or if amendment is needed before publication, please inform us by e-mail (EURLSalmonella@rivm.nl) asap.
- For the ones who gave a presentation(s): please send **abstract(s)** as soon as possible (if not already done), **by 15 June 2021 at latest**.





Thank you very much for your attention!



Thank you all

- European Commission
- Speakers
- Participants
- EURL-staff



Stay healthy!!

